

1. Apparatus for forming a lesion in body tissue, the apparatus comprising;
  - i) a probe adapted to contact body tissue, and having at least one electrode,
  - 5 ii) at least one temperature sensor capable of measuring the temperature of the probe and generating signals representative of the said temperature,
  - iii) a controller comprising generation means for generating electromagnetic energy and supplying said energy to the at least one electrode, and control means for receiving the signals from the at least one temperature sensor and controlling  
10 the generation means such that
    - a) the temperature of the probe is ramped up to a first equilibration temperature,
    - b) the temperature of the probe is held substantially constant at the  
15 equilibration temperature for a period of time to allow the temperature of different parts of the probe to equilibrate, and
    - c) the temperature of the probe is then increased to and maintained at a final steady state temperature.
2. Apparatus according to claim 1, wherein the equilibration temperature is between 90°C and 105°C.
- 20 3. Apparatus according to claim 2, wherein the equilibration temperature is substantially 100°C.
4. Apparatus according to any of claim 1, wherein the final steady state temperature is between 100°C and 115°C.
5. Apparatus according to claim 4, wherein the final steady state temperature is  
25 substantially 110°C.

6. A method of forming a lesion in body tissue comprising the steps of providing a probe capable of contacting body tissue to be treated, delivering electromagnetic energy to the probe such as to raise the temperature of the tissue in contact with the probe, measuring the temperature of the probe, and controlling the delivery of the electromagnetic energy such that
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- a) in an initial ramp-up phase, the temperature of the probe is raised rapidly to a first threshold temperature,
  - b) in a second equilibrating phase, the temperature of the probe is held substantially constant for a period of time to allow the temperature of
  - 10 different parts of the probe to equilibrate, and
  - c) in a subsequent treatment phase, the temperature of the probe is raised to a second, higher threshold temperature such that a lesion is formed in the tissue adjacent the probe without the complete removal of electrolytes in the tissue adjacent to the probe through vaporisation.
- 15 7. A method of forming a lesion in body tissue according to claim 6, wherein the first threshold temperature is between 90°C and 105°C.
8. A method of forming a lesion in body tissue according to claim 7, wherein the first threshold temperature is substantially 100°C.
9. A method of forming a lesion in body tissue according to claim 6, wherein the
- 20 equilibrating phase takes place for a predetermined period of time.
10. A method of forming a lesion in body tissue according to claim 6, wherein the equilibrating phase takes place until a predetermined time from the start of the ramp-up phase.
11. A method of forming a lesion in body tissue according to claim 6, wherein the
- 25 second threshold temperature is between 100°C and 115°C.

12. A method of forming a lesion in body tissue according to claim 11, wherein the second threshold temperature is substantially 110°C.